



## FROST PROTECTION THERMOSTAT, IP65

**TF**

### MAIN FEATURES

The new antifreeze thermostat has been realized in polymeric element. Main features are solidity, sturdiness typical for electromechanical units, the unit is quite light, indestructible, it can't be attacked by rust and is protected against error commutations due to vibration present on plant. The general standard protection IP65 is suitable for quite all applications.

### USAGE

The new thermostat TFxx is a security unit, his aim is to control temperature of heating and cooling batteries, in air conditioning system, inside air pipe ventilation and in all applications in which it is necessary to avoid freeze formation.

The switching contact (SPDT) of 15(8) A allows usage in different functions such as:

- driving a ventilator
- driving a damper
- opening or closing a valve or heating or cooling circuit
- driving an electric heater
- driving a pump for heating or cooling circuit
- switching off cooling system or humidifier
- indicating an alarm state by an acoustic or visual device

TYPE	DIFFERENTIAL K	RESET	CAPILLARY LENGTH m
TF30	2	auto	3
TF30R	FT	man	3
TF60	2	auto	6
TF60R	FT	man	6
TF18	2	auto	1.8
TF18R	FT	man	1.8

<b>Accessory</b>	DBZ-01 - Brass pocket 120mm, 12 x 1
	DBZ-02 - Stainless steel pocket AISI 304 120mm, 12 x 1
	DBZ-05 - Set of 6 mounting brackets for capillary of antifrost thermostats

FT manual minimal reset

### TECHNICAL DATA

<b>Range:</b>	-10..+10°C or +14..+50°F
<b>Contact type:</b>	SPDT microswitch (fig. 1)
<b>Switch capacity:</b>	15 (8) A 24..250Vac
<b>Accuracy:</b>	± 1 K
<b>Protection:</b>	Class I IP 65
<b>Housing temperature:</b>	max. +55°C 10..90% r.h. (without condensing)
<b>Max. bulb temp.:</b>	+150°C
<b>Storage:</b>	-30..+60°C < 95% r.h.
<b>Housing:</b>	Base in ABS, cover in transparent PC
<b>Dimensions:</b>	140x62x65 mm (cable gland included)
<b>Weight:</b>	320 g

### OPERATING

The thermostat TFxx switches when the temperature sensed by capillary for a minimum length of 50 cm drops below the temperature set on the knob. When temperature increases, the contact returns automatically to the initial position. For TFxxR versions it is necessary a manual reset from user to allow the contact to return to the initial position.

The gas inside the sensible element increases his volume and with a mechanism acts on the microswitch. The capillary is sensible to temperature for the whole length.

The models with range under the cover for setting the setpoint avoids any involuntary change of the set.



**COMPOSITION**

The unit has a housing in ABS (base) and transparent PC (cover) with a fireproof V0 class. The internal part are in polymeric element and stainless steel to ensure mechanical stability. The sensible element is in brass full of gas.

**INSTALLATION**

The thermostat is available with 3 different sensible elements that allow the use in different applications. The version with 1,8 m capillary length has a bulb that allows the use of a 120 mm pocket available as accessory in brass or inox. The versions with 3 and 6 m can be used in air pipe or batteries of exchanger. The capillary must be applied uniformly on the surface to control (Fig. 2). This surface must not be folded with a radius of curvature lower than 2 cm and there must not be any bottleneck. So the use with DBZ-05 mounting bracket is not recommended. In addition avoid to put the capillary across iron plate wall without any protection. The room temperature around the unit must never be below the setpoint temperature.

Wiring diagram

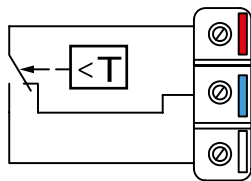


Fig. 1

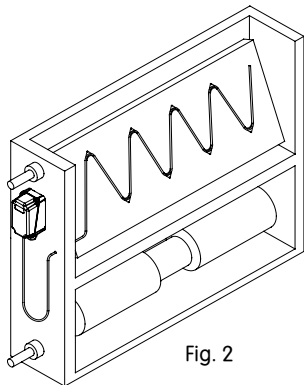


Fig. 2

Dimensions (mm)

